

WE CLAIM:

1. A method of cleaning carpet or upholstery, comprising:  
applying to the carpet or upholstery an aqueous preparation of a solid or agglomerated  
5 cleaning composition, the solid or agglomerated cleaning composition comprising:  
active oxygen compound comprising peroxygen moiety;  
surfactant; and  
builder.

10 2. The method of claim 1, wherein applying comprises extracting the carpet or  
upholstery.

15 3. The method of claim 1, wherein applying comprises brushing or rubbing the  
cleaning composition on the carpet.

4. The method of claim 1, wherein applying comprises pre-spotting, pre-  
spraying, or extracting the carpet or upholstery, or combinations thereof.

20 5. The method of claim 1, comprising applying the cleaning composition at a  
concentration and for a duration effective to achieve sanitizing the carpet or upholstery.

6. The method of claim 1, further comprising removing a portion of the  
composition from the carpet.

25 7. The method of claim 1, wherein the method omits pre-spotting the carpet or  
upholstery.

8. The method of claim 1, wherein the method omits pre-spraying the carpet or  
upholstery.

9. The method of claim 1, wherein the aqueous preparation comprises about 0.1 to about 10 wt-% of the solid or agglomerated cleaning composition, and a pH of about 7 to about 11.

10. The method of claim 9, wherein the aqueous preparation comprises a pH of about 9 to about 10.

11. The method of claim 10, wherein the aqueous preparation comprises a pH less than 10.

12. The method of claim 1, wherein the cleaning composition comprises:  
about 1 to about 99 wt-% active oxygen compound;  
about 0.1 to about 50 wt-% surfactant; and  
about 1 to about 99 wt-% builder.

13. The method of claim 12, wherein the cleaning composition comprises:  
about 15 to about 65 wt-% active oxygen compound;  
about 2 to about 20 wt-% surfactant; and  
about 15 to about 65 wt-% builder.

14. The method of claim 13, wherein the cleaning composition comprises:  
about 40 to about 80 wt-% active oxygen compound;  
about 4 to about 15 wt-% surfactant; and  
about 15 to about 45 wt-% builder.

15. The method of claim 14, wherein the cleaning composition comprises:  
about 50 to about 60 wt-% active oxygen compound;  
about 8 to about 10 wt-% surfactant; and  
about 25 to about 30 wt-% builder.

16. The method of claim 1, wherein the cleaning composition comprises:  
about 70 to about 95 wt-% active oxygen compound;  
about 1 to about 15 wt-% surfactant; and  
about 5 to about 30 wt-% builder.

5

17. The method of claim 1, wherein the cleaning composition comprises:  
about 5 to about 30 wt-% active oxygen compound;  
about 1 to about 15 wt-% surfactant; and  
about 55 to about 95 wt-% builder.

10

18. The method of claim 1, wherein the cleaning composition comprises:  
about 50 to about 80 wt-% active oxygen compound;  
about 1 to about 15 wt-% surfactant; and  
about 15 to about 55 wt-% builder.

15

19. The method of claim 18, wherein the cleaning composition comprises:  
about 50 to about 60 wt-% active oxygen compound;  
about 6 to about 10 wt-% surfactant; and  
about 15 to about 25 wt-% builder.

20

20. The method of claim 1, wherein the cleaning composition comprises:  
about 60 to about 80 wt-% active oxygen compound;  
about 6 to about 10 wt-% surfactant; and  
about 20 to about 30 wt-% builder.

25

21. The method of claim 1, wherein the cleaning composition comprises:  
about 60 to about 80 wt-% active oxygen compound;  
about 1 to about 3 wt-% surfactant; and  
about 15 to about 25 wt-% builder.

30

22. The method of claim 1, wherein the cleaning composition comprises:  
about 50 to about 60 wt-% active oxygen compound;  
about 1 to about 3 wt-% surfactant; and  
about 30 to about 40 wt-% builder.

5

23. The method of claim 1, wherein the cleaning composition comprises:  
about 5-15% phosphonate;  
about 15-25% condensed phosphate;  
about 5-10% nonionic surfactant;  
about 55-65% hydrogen peroxide adduct.

10

24. The method of claim 1, wherein the cleaning composition comprises:  
about 5-10% aminocarboxylate;  
about 5-10% nonionic surfactant;  
about 15-25% alkali metal carbonate;  
about 10-15% carboxylic acid;  
about 50-60% hydrogen peroxide adduct.

15

25. The method of claim 1, wherein the cleaning composition comprises:  
about 5-15% aminocarboxylate;  
about 1-5% nonionic surfactant;  
about 10-30% alkali metal carbonate, alkali metal bicarbonate, or mixtures thereof  
about 50-90% hydrogen peroxide adduct.

20

26. The method of claim 1, wherein the cleaning composition comprises as active  
oxygen compound inorganic active oxygen compound, organic active oxygen compound, or  
mixtures thereof.

25

27. The method of claim 26, wherein the inorganic active oxygen compound  
comprises hydrogen peroxide adduct.

30

28. The method of claim 26, wherein the inorganic active oxygen compound comprises percarbonate, perborate, persulfate, perphosphate, persilicate, or mixtures thereof.

5 29. The method of claim 1, wherein the cleaning composition comprises as surfactant nonionic surfactant, amphoteric surfactant, anionic surfactant, or mixtures thereof.

30. The method of claim 29, wherein the nonionic surfactant comprises alcohol ethoxylate, alcohol propoxylate, alcohol ethoxylate-propoxylate, or mixtures thereof.

10 31. The method of claim 30, wherein the nonionic surfactant comprises a solid, powder, or paste at 20 °C.

15 32. The method of claim 1, wherein the cleaning composition comprises as builder zeolite, citric or citrate-type chelating agent, alkyl diamine polyacetic acid-type chelating agent, acrylic or polyacrylic acid-type stabilizing agent, phosphonic acid or phosphonate-type chelating agent, aminocarboxylic acid, condensed phosphate, polymeric polycarboxylate, or a mixture thereof.

20 33. The method of claim 32, wherein the builder comprises phosphonate and the phosphonate comprises amino tri(methylene phosphonic) acid; 1-hydroxyethylidene-1,1-diphosphonic acid; diethylenetriaminopenta(methylene phosphonic) acid; alanine-N,N-diacetic acid; diethylenetriaminepentaacetic acid; salts thereof; or mixtures thereof.

25 34. The method of claim 32, wherein the builder comprises condensed phosphate and the condensed phosphate comprises sodium tripolyphosphate, potassium tripolyphosphate, magnesium tripolyphosphate, sodium pyrophosphate, potassium pyrophosphate, sodium hexametaphosphate, potassium hexametaphosphate, or a mixture thereof.

35. The method of claim 32, wherein the builder comprises nitrilotriacetate, citric acid, ethylene diamine tetraacetate, salt thereof, or mixture thereof.

36. The method of claim 1, wherein the cleaning composition further comprises alkalinity source, acidity source, cleaning enzyme, hardening agent, solubility modifier, detergent filler, defoamer, antimicrobial agent, a precipitation threshold agent or system, aesthetic enhancing agent, effervescent agent, activator for the active oxygen compound, or combinations thereof.

37. The method of claim 36, wherein the cleaning composition comprises nonionic surfactant, phosphonate, condensed phosphate, hydrogen peroxide adduct, C1-C6 carboxylic acid, alkali metal hydrogen carbonate, alkali metal hydrogen phosphate, alkali metal hydrogen sulfate, or combinations thereof.

38. The method of claim 36, wherein the cleaning composition comprises nonionic surfactant, aminocarboxylate, hydrogen peroxide adduct, C1-C6 carboxylic acid, alkali metal hydrogen carbonate, alkali metal hydrogen phosphate, alkali metal hydrogen sulfate, or combinations thereof.

39. A method of sanitizing carpet or upholstery, comprising:  
applying to the carpet or upholstery an aqueous preparation of a solid or agglomerated cleaning composition, the solid or agglomerated cleaning composition comprising:  
active oxygen compound comprising peroxygen moiety;  
surfactant; and  
builder.

40. A method of cleaning carpet or upholstery, comprising:  
applying to the carpet or upholstery a powdered or agglomerated cleaning composition comprising:

active oxygen compound comprising peroxygen moiety;

surfactant; and  
builder.

41. A method of sanitizing carpet or upholstery, comprising:  
5 applying to the carpet or upholstery a powdered or agglomerated cleaning composition comprising:

active oxygen compound comprising peroxygen moiety;  
surfactant; and  
builder.

42. A method for removing a stain from carpet or upholstery, comprising:  
applying to the carpet or upholstery an aqueous preparation of a solid or agglomerated  
cleaning composition, the solid or agglomerated cleaning composition comprising:

active oxygen compound comprising peroxygen moiety;  
surfactant; and  
builder or sequestrant.

43. A method for removing a stain from carpet or upholstery, comprising:  
applying to the carpet or upholstery a solid or agglomerated cleaning composition, the  
20 solid or agglomerated cleaning composition comprising:

active oxygen compound comprising peroxygen moiety;  
surfactant; and  
builder or sequestrant.

- 25 44. A solid or agglomerated carpet or upholstery cleaning composition comprising:

about 40 to about 90 wt-% active oxygen compound;  
about 1 to about 11 wt-% surfactant; and  
about 20 to about 60 wt-% builder.

45. The composition of claim 44, comprising:  
about 50 to about 80 wt-% active oxygen compound;  
about 5 to about 11 wt-% surfactant; and  
about 20 to about 35 wt-% builder.

5

46. The composition of claim 45, comprising:  
about 80 wt-% active oxygen compound;  
about 2 wt-% surfactant; and  
about 18 wt-% builder.

10

47. The composition of claim 44, comprising:  
about 50 to about 70 wt-% active oxygen compound;  
about 1 to about 5 wt-% surfactant; and  
about 20 to about 40 wt-% builder.

15

48. The composition of claim 44, comprising:  
about 55 wt-% active oxygen compound;  
about 8 wt-% surfactant; and  
about 20 wt-% builder.

20

49. The composition of claim 44, comprising:  
about 50 to about 60 wt-% active oxygen compound;  
about 8 to about 10 wt-% surfactant; and  
about 25 to about 30 wt-% builder.

25

50. The composition of claim 44, comprising:  
about 60 to about 80 wt-% active oxygen compound;  
about 6 to about 10 wt-% surfactant; and  
about 20 to about 30 wt-% builder.

30



51. The composition of claim 44, comprising:  
about 50 to about 60 wt-% active oxygen compound;  
about 1 to about 3 wt-% surfactant; and  
about 30 to about 40 wt-% builder.

5

52. The composition of claim 44, comprising:  
about 5-10% aminocarboxylate;  
about 5-10% nonionic surfactant;  
about 15-25% alkali metal carbonate;  
about 10-15% carboxylic acid;  
about 50-60% hydrogen peroxide adduct.

10

53. The composition of claim 44, comprising:  
about 50 to about 70 wt-% active oxygen compound;  
about 7 to about 11 wt-% surfactant; and  
about 25 to about 35 wt-% builder.

15

54. The composition of claim 44, comprising as active oxygen compound  
inorganic active oxygen compound, organic active oxygen compound, or mixtures thereof.

20

55. The composition of claim 54, wherein the active oxygen compound comprises  
inorganic active oxygen compound.

56. The composition of claim 55, wherein the inorganic active oxygen compound  
comprises hydrogen peroxide adduct.

25

57. The composition of claim 55, wherein the inorganic active oxygen compound  
comprises percarbonate, perborate, persulfate, perphosphate, persilicate, or mixtures thereof.

58. The composition of claim 54, wherein the active oxygen compound comprises organic active oxygen compound.

59. The composition of claim 44, comprising as surfactant nonionic surfactant, amphoteric surfactant, anionic surfactant, or mixtures thereof.

60. The composition of claim 59, wherein the nonionic surfactant comprises alcohol ethoxylate, alcohol propoxylate, alcohol ethoxylate-propoxylate, or mixtures thereof.

61. The composition of claim 60, wherein the nonionic surfactant comprises a solid, powder, or paste at 20 °C.

62. The composition of claim 44, comprising as builder zeolite, citric or citrate-type chelating agent, alkyl diamine polyacetic acid-type chelating agent, acrylic or polyacrylic acid-type stabilizing agent, phosphonic acid or phosphonate-type chelating agent, aminocarboxylic acid, condensed phosphate, polymeric polycarboxylate, or a mixture thereof.

63. The composition of claim 62, wherein the builder comprises phosphonate and the phosphonate comprises amino tri(methylene phosphonic) acid; 1-hydroxyethylidene-1,1-diphosphonic acid; diethylenetriaminopenta(methylene phosphonic) acid; alanine-N,N-diacetic acid; diethylenetriaminepentaacetic acid; salts thereof; or mixtures thereof.

64. The composition of claim 62, wherein the builder comprises condensed phosphate and the condensed phosphate comprises sodium tripolyphosphate, potassium tripolyphosphate, magnesium tripolyphosphate, sodium pyrophosphate, potassium pyrophosphate, sodium hexametaphosphate, potassium hexametaphosphate, or a mixture thereof.

65. The composition of claim 62, wherein the builder comprises nitrilotriacetate, citric acid, ethylene diamine tetraacetate, salt thereof, or mixture thereof.

66. The composition of claim 44, further comprising alkalinity source, acidity source, cleaning enzyme, hardening agent, solubility modifier, detergent filler, defoamer, antimicrobial agent, a precipitation threshold agent or system, aesthetic enhancing agent, effervescent agent, activator for the active oxygen compound, or combinations thereof.

67. The composition of claim 66, comprising nonionic surfactant, phosphonate, condensed phosphate, hydrogen peroxide adduct, C1-C6 carboxylic acid, alkali metal hydrogen carbonate, alkali metal hydrogen phosphate, alkali metal hydrogen sulfate, or combinations thereof.

68. The composition of claim 66, comprising nonionic surfactant, aminocarboxylate, hydrogen peroxide adduct, C1-C6 carboxylic acid, alkali metal hydrogen carbonate, alkali metal hydrogen phosphate, alkali metal hydrogen sulfate, or combinations thereof.

69. A solid or agglomerated carpet or upholstery cleaning composition comprising:

about 50 to about 70 wt-% active oxygen compound;  
about 1 to about 5 wt-% surfactant; and  
about 20 to about 40 wt-% builder.

70. A solid or agglomerated carpet or upholstery cleaning composition comprising:

about 50 to about 60 wt-% active oxygen compound;  
about 8 to about 10 wt-% surfactant; and  
about 25 to about 30 wt-% builder.

71. A solid or agglomerated carpet or upholstery cleaning composition comprising:

about 60 to about 80 wt-% active oxygen compound;

about 6 to about 10 wt-% surfactant; and

about 20 to about 30 wt-% builder.

72. A solid or agglomerated carpet or upholstery cleaning composition comprising:

about 50 to about 60 wt-% active oxygen compound;

about 1 to about 3 wt-% surfactant; and

about 30 to about 40 wt-% builder.

73. A solid or agglomerated carpet or upholstery cleaning composition comprising:

about 50 to about 70 wt-% active oxygen compound;

about 7 to about 11 wt-% surfactant; and

about 25 to about 35 wt-% builder.

74. A solid or agglomerated carpet or upholstery cleaning composition, comprising:

about 50 to about 80 wt-% sodium percarbonate;

about 1 to about 11 wt-% alcohol ethoxylate, alkylbenzene sulfonate, or mixtures thereof; and

about 20 to about 40 wt-% non-phosphate builder.

75. A method of cleaning carpet or upholstery, comprising:  
applying to the carpet or upholstery an aqueous preparation of a solid or agglomerated cleaning composition, the aqueous preparation comprising:

about 0.5 to about 0.8 wt-% sodium percarbonate;

about 0.01 to about 0.2 wt-% alcohol ethoxylate, alkylbenzene sulfonate, or mixtures thereof; and

about 0.2 to about 0.4 wt-% non-phosphate builder.

5            76.    The method of claim 75, wherein the aqueous preparation has a pH of about 7 to about 11.

77.    The method of claim 76, wherein the aqueous preparation has a pH of about 9 to about 10.

10           78.    The method of claim 77, wherein the aqueous preparation has a pH less than 10.

15           79.    An aqueous preparation for cleaning carpet or upholstery comprising:  
about 0.2 to about 9 wt-% active oxygen compound;  
about 0.005 to about 1.1 wt-% surfactant; and  
about 0.1 to about 6 wt-% builder;  
wherein the aqueous preparation has a pH of about 7 to about 11.

20           80.    The aqueous preparation of claim 79, having a pH of about 9 to about 10.

81.    The aqueous preparation of claim 80, having a pH less than 10.

25           82.    The aqueous preparation of claim 79, comprising  
about 0.4 to about 0.9 wt-% active oxygen compound;  
about 0.01 to about 0.11 wt-% surfactant; and  
about 0.2 to about 0.6 wt-% builder.

30           83.    The aqueous preparation of claim 82, having a pH less than 10.

84. An aqueous preparation for cleaning carpet or upholstery comprising:  
about 0.5 to about 0.8 wt-% sodium percarbonate;  
about 0.01 to about 0.2 wt-% alcohol ethoxylate, alkylbenzene sulfonate, or mixtures  
thereof; and  
5 about 0.2 to about 0.4 wt-% non-phosphate builder.

09/08/01 16:26:50